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AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior listings, and all prior versions, of claims in the application.

<u>LISTING OF CLAIMS</u>:

- (Currently Amended) A high throughput method for identifying agents capable of producing a desired biological response in whole cells, the method comprising the steps of:
 - (a) providing receptacles having a culture surface;
- (b) placing different mixtures comprising single said agents into selective ones of said receptacles according to a statistical design, wherein said statistical design is a space-filling design based on a coverage criteria, a lattice design, or a latin square design;
 - (c) immobilizing said mixtures of single agents to said culture surface;
 - (d) contacting said agents from (c) with said whole cells;
- (e) acquiring data indicative of said desired biological response in said contacted cells; and
- (f) identifying which of said mixtures of single agents and/or which single agents in said mixtures are effective in producing said desired biological response in said contacted cells using statistical modeling of said acquired data.
- (Original) The method of claim 1, further comprising the step of placing single said agents into others of said receptacles.
- (Original) The method of claim 1, wherein said culture surface is coated with an agent-immobilizing material.

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- 4. (Canceled).
- 5. (Original) The method of claim 3, wherein said agent-immobilizing material contains reactive groups for covalently immobilizing said agents.
- (Original) The method of claim 3, wherein said agent-immobilizing material on said culture surface does not support cell adhesion.
- 7. (Original) The method of claim 1, wherein said agents are cell adhesion ligands and/or extrinsic factors.
 - 8 10. (Canceled).
- 11. (Original) The method of claim 1, wherein said receptacles are wells of a 96-well plate.
- 12. (Original) The method of claim 1, wherein the total concentration of said agents in each receptacle is the same.
- 13. (Original) The method of claim 1, wherein the total concentration of said agents in each receptacle is different.
- 14. (Original) The method of claim 1, wherein the concentration of a single said agent differs between said receptacles.

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- 15. (Canceled).
- 16. (Canceled).
- 17. (Original) The method of claim 1, further comprising repeating said steps with a subset of said identified mixtures of single agents.
- 18. (Original) The method of claim 1, further comprising repeating said steps, wherein the concentrations of agents in said identified mixtures are varied.
- 19. (Original) The method of claim 1, wherein said statistical modeling is an algorithm for comparing said acquired data with the statistical design.